Syllabus
Introduction to Sustainable Agriculture
PLS 15 - UC Davis - Spring 2009

Personnel

Course Instructor: Mark Van Horn. mxvanhorn@udavis.edu, 530-752-7645
Office hours: Tuesdays 12 -1, or by appointment, 113 Bowley

Teaching Assistant: Ethan Grundberg. eagrundberg@ucdavis.edu
Office hours: Thursdays 4 – 5, or by appointment, 111 Bowley

Course Development Assistant: Aubrey White, abwhite@ucdavis.edu
Available: by appointment

Class Meetings

Lectures: T, R 10:30 – 11:50, 101 Bowley

Laboratories: M 1:10 – 4:00, 105 Bowley. CRN 93320
R 1:10 – 4:00, 105 Bowley. CRN 93321

Required Field Trip: All students must attend an all day field trip on Saturday, May 16

Course Overview

Agricultural sustainability can be viewed from many perspectives including biological, ecological, social, economic, political and ethical. In this course, we will explore diverse aspects of agriculture and agricultural sustainability, primarily from various natural science perspectives. However, we will also use other perspectives to understand some of the diverse factors which influence, and are influenced by, agriculture and issues of sustainability. We will examine the resources and conditions required by agriculture, how agriculture uses resources, some of the intended and unintended consequences of agriculture, and various questions these raise about the sustainability. Examples will be drawn from California and several other parts of the world and from throughout the history of agriculture, including the present.

Laboratory exercises and field trips will provide students with direct, in-field experiences with diverse aspects of a number of production practices and agricultural systems. Students will develop and use tools to assess the sustainability of agricultural operations, gain experience using science-based information to understand the ecology and management of crops, soils and pests and visit a wide range of agricultural operations in the region.

PLS 15 is new course and is designed to complement CRD 20, Food Systems. CRD 20 is offered during Fall quarters and emphasizes social science perspectives on food and agriculture, within the context of an interdisciplinary understanding of sustainability. CRD 20 and PLS 15 soon will be the introductory courses for a new major, Sustainable Agriculture and Food Systems.

Required Text and Readings

The PLS 15 Reader is available at Davis Copy Shop, 231 3rd Street. 530-758-2311
Reading assignments will be announced in class and posted in the 'Announcements' section of the course web site (on SmartSite). The reader will be supplemented with class handouts and readings posted in the 'Resources' section of the course web site.

Important Notes

Laboratory attendance is mandatory. You may have only one unexcused lab session absence without penalty. Any additional unexcused lab absences (*or an unexcused absence on May 16)* will lower your overall course grade 5% for each unexcused lab absence. Acceptable (excused) absences are for family or medical emergencies, which must be explained by a signed note from the appropriate person.

Dress and be prepared for field activities for all labs. We will be out in the field for at least part of all labs. Dress appropriately, including wearing sturdy shoes. Protect yourself from the sun (e.g., hat, sunscreen). Bring water to drink on field trips, and to other labs if you wish.

Lab Notebooks: Each student must purchase a 3-ring binder with 8 ½" x 11" loose leaf paper to use as a lab notebook. This format is necessary to allow you to add handouts to your notebook, as well as to temporarily remove sections to turn in for grading.
Bring your lab notebook to *all* labs.

Assignments are due in hard copy (print) *at the start of the class* (lecture or lab) unless the assignment explicitly states otherwise. Points will removed for late assignments.

Outside class time group work: All students will be assigned to a lab group. Some of the associated group work will be conducted outside of class time. You will need to coordinate with others in your lab group to schedule times to meet (approximately once per week).

Outside class time field work: All students will need to make weekly individual field observations for laboratory activities. Some weeks these will need to be completed outside of class (lab) time.

We recommend that you bring laptop computers to lecture on April 16th for demonstration on using on-line literature search tools

Student feedback and the role of Course Development Assistant

This is a new course. In developing it, we have worked to create a course that is informative and interesting and helps you develop some useful skills. We would like your anonymous feedback on various aspects of the course and we will formally ask you for that feedback at the end of the quarter (and perhaps before then as well). In addition, one of the responsibilities of the course development assistant, Aubrey White, is to facilitate student feedback. Therefore, you are encouraged to contact her with any feedback you may have about the class at any time. You can contact her by email (abwhite@ucdavis.edu) or in person (she will be attending at least part of most of the lab sessions) and you can provide your feedback in person (e.g., outside of class time), via email, via a note, or by other means. Any feedback provided to her will have no impact on a student's grade in this class. While she may pass on concerns or other information gathered from student input, she will not in any way indicate the source of any such information to the instructor or teaching assistant. In addition, she will have no role in grading assignments or otherwise evaluating students or in assigning or reporting grades.

Grading Systems (subject to minor modification)

Lecture (60% of total)	Laboratory (40% of total)
Class Assignments: 5%	Pest Management: 15%
Midterm Exam: 25%	Sustainability Indicators Rubric: 15%
Final Exam: 30%	Crops: 5%
	Soils: 5%

Lecture Schedule (subject to modification)

Week	Date	Lecture Topic
Week 1	31-Mar	What is sustainability?
	2-Apr	What is agriculture?
Week 2	7-Apr	Features of agriculture: sustainable and unsustainable
	9-Apr	Soils, nutrients and their management
Week 3	14-Apr	Soils, nutrients and their management
	16-Apr	Climate, weather and water
Week 4	21-Apr	Water and its management
	23-Apr	Domesticated plants and animals: evolution and biology
Week 5	28-Apr	Cropping systems
	30-Apr	Midterm Exam
Week 6	5-May	Cropping systems
	7-May	Livestock systems
Week 7	12-May	Livestock systems
	14-May	Pest Management
Week 8	19-May	Pest management
	21-May	Energy and Labor
Week 9	26-May	"Alternative" agriculture approaches
	28-May	Issues in sustainable agriculture
Week 10	2-Jun	Deciding, managing and learning in sustainable agriculture
	4-Jun	Sustainability revisited
Final Exams	10-Jun	Final Exam (Wednesday 10:30 - 12:30)

Laboratory Schedule

Laboratory schedules will be distributed in lab sections